

## REMARKS

Claims 1,2 and 3-11 have been amended. Claim 3 has been cancelled and the limitations therein have been incorporated into independent claims 1 and 11. Support for additional amendments to claims 1 and 11 can be found, for example, at lines 22-27 on page 26 of the specification and in FIGs. 14 and 15.

Minor amendments have been made to claims 2-10.

New Claims 12-14 have been added and are somewhat similar to amended claim 1.

Claims 1-14 are pending and under consideration. Reconsideration is respectfully requested.

The Applicants respectfully submit that item 3 at page 2 of the Office Action inaccurately states the priority date is August 28, 1998. Please note that the application claims priority based upon Japanese Patent Application 10-212639, filed July 28, 1998. Therefore, it is respectfully requested that the Examiner acknowledge the priority date of July 28, 1998.

**I. REJECTION OF CLAIMS 1-11 UNDER 35 U.S.C. § 102(a) AS BEING ANTICIPATED BY NEE ET. AL., "AUTOMATIC DETERMINATION OF 3-D PARTITIONING LINES AND SURFACES IN PLASTIC MOULD DESIGN" (HEREINAFTER "NEE"):**

The present invention, as recited in amended claim 1, for example, relates to a mold design system for designing a mold for use in molding a product, comprising two-dimensional projections means for producing two-dimensional projection data by projecting edges of a product shape represented by three-dimensional graphic data onto a plane perpendicular to a mold opening direction. The mold design system further comprises a parting line determination means for sequentially determining, out of candidate edges contiguous to a determined parting line, a candidate edge forming a largest interior angle with said determined parting line at a contact point therewith on said two-dimensional projection data, as a parting line of said mold for molding said product shape. In the parting line determination means, when said candidate edge forming said largest interior angle intersects with another candidate edge an even number of times, said candidate edge is set as said parting line, and when said candidate edge forming said largest interior angle intersects with said other candidate edge an odd number of times, said other candidate edge is set as said parting line.

Nee discloses automatic determination of 3-D parting lines and surfaces in plastic injection mould designs. Specifically, the common boundaries of inside and outside surface groups, G1 and G3 of a plastic part as shown in FIG. 2 are classified as the parting lines (see section 4 on page 96).

At pages 2 and 3 of the Office Action, the Examiner asserts that Nee teaches the claimed invention by using adjacent surfaces and their outside boundary edge-loops to determine possible parting lines and a principal surface defined as the surface in which its projected area onto the plane perpendicular to a parting direction of the core and cavity of the mould, is maximum among all the surfaces in its group. After the principal surface is identified, manipulations of obtaining common edges and searching for the largest edge-loops are carried out only in surfaces outside the principal surface (see section 5 on pages 96-97).

However, the Applicants respectfully submit that Nee fails to teach or suggest “parting line determination means for sequentially determining, out of candidate edges contiguous to a determined parting line, a candidate edge forming a largest interior angle with said determined parting line at a contact point therewith on said two-dimensional projection data, as a parting line of said mold for molding said product shape, wherein when said candidate edge forming said largest interior angle intersects with another candidate edge an even number of times, said candidate edge is set as said parting line, and when said candidate edge forming said largest interior angle intersects with said other candidate edge an odd number of times, said other candidate edge is set as said parting line,” as recited in amended claim 1.

Although the above comments are specifically directed to claim 1, it is respectfully submitted that the comments would be helpful in understanding differences of various other rejected claims over the cited reference. Therefore, it is respectfully submitted that the rejection is overcome.

Accordingly, claims 1-11 patentably distinguish over Nee. Therefore, it is respectfully submitted that the rejection is overcome.

## **II. CONCLUSION:**

In view of the foregoing amendments and remarks, it is respectfully submitted that each of the claims patentably distinguishes over the prior art, and therefore, defines allowable subject matter. A prompt and favorable reconsideration of the rejection along with an indication of allowability of all pending claims are therefore respectfully requested.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: Sept 22, 2004

By:

Deidre M. Davis

Deidre M. Davis  
Registration No. 52,797

1201 New York Avenue, NW, Suite 700  
Washington, D.C. 20005  
Telephone: (202) 434-1500  
Facsimile: (202) 434-1501